June 23, 2014

Mr. James Hitzeroth
Environmental Manager
Republic Services, Inc.
26W580 Schick Road
Hanover Park, Illinois 60103

Subject: **Zion Surface Emissions Monitoring Report – Second Quarter 2014**
Zion Landfill Site 1 (Phases A and B) and Old Site 2
Zion, Illinois
CEC Project 140-168

Dear Mr. Hitzeroth:

Civil & Environmental Consultants, Inc. (CEC) is pleased to present the information pertaining to the Second Quarter 2014 surface emissions monitoring (SEM) conducted at the Zion Site 1 Phase A and B and Old Site 2 Landfill on June 18, 2014. The monitoring event was conducted in accordance with (1) regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); and (2) 40 CFR 60, Appendix A Method 21, promulgated by the United States Environmental Protection Agency (USEPA).

A MicroFID I/S flame ionization detector (FID) was used to perform the emissions monitoring. The FID was calibrated prior to use, meeting Method 21 compliance requirements. Calibration logs were completed by the field technician performing the work, and are included in Attachment A.

The SEM was started by the CEC technician at 10:00 a.m. and was concluded at 3:30 p.m. Thunderstorms with rain and high winds were prevalent from mid-morning until 12:00 p.m. The high temperature for the location was 73 degrees Fahrenheit. There were no readings greater than 500 ppm above background measurements detected during these monitoring events.

If you have questions or need clarifications, please call Bill Dillon at (330) 618-1670.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

William Dillon
Field Service Manager

Beau Harp, P.G.
Principal

Attachment A: Second Quarter 2014 SEM Summary

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ATTACHMENT A

SECOND QUARTER 2014 SEM SUMMARY

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: Zion Landfill DATE: 6/18/2014

EXPIRATION DATE (3 MOS.): 9/18/2014

TIME: 9:45am

INSTRUMENT MAKE: micro fid MODEL: microfid I/S S/N: czhg314

MEASUREMENT #1:

Meter Reading for Zero Air: 0.0 ppm (1)

Meter Reading for Calibration Gas: 497.0 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 0.0 ppm (3)

Meter Reading for Calibration Gas: 498.0 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 0.0 ppm (5)

Meter Reading for Calibration Gas: 496.0 ppm (6)

CALCULATE PRECISION:

$$\frac{[500-497] + [500-498] + [500-496]}{3} \times \frac{1}{500} \times \frac{100}{1}$$

= 0.60 % (must be less than 10%)

PERFORMED BY: Gregory Komperda

RESPONSE TIME TEST RECORD

LANDFILL NAME: _____

DATE: 6/18/2014

TIME: 9:45 AM

INSTRUMENT MAKE: microFid MODEL: microfidI/S S/N: czhg314

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 496.0 ppm

90% of the Stabilized Reading: 446.40 ppm

Time to Reach 90% of Stabilized reading
After switching from Zero Air to
Calibration Gas 5 seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 498.0 ppm

90% of the Stabilized Reading: 448.20 ppm

Time to Reach 90% of Stabilized Reading
After switching from Zero Air to
Calibration Gas 6 seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 497.0 ppm

90% of the Stabilized Reading: 447.30 ppm

Time to Reach 90% of Stabilized Reading
After switching from Zero Air to
Calibration Gas 6 seconds (3)

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3}$$

= 5.67 SECONDS (MUST BE LESS THAN 30 SECONDS)

PERFORMED BY: Gregory Komperda

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: Zion Landfill

INSTRUMENT MAKE: micro fid MODEL: microfidI/S S/N: czhg314

Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.

2. Introduce the calibration gas into the probe.
   Stable reading = 498.0 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 0.0 ppm (1)

2. Downwind Reading (highest in 30 seconds): 0.0 ppm (2)

Calculate Background Value:

$$\frac{(1) + (2)}{2}$$

Background = 0.0 ppm

PERFORMED BY: Greg Komperda TIME: 9:45am

DATE: 6/18/2014

QUARTERLY SURFACE MONITORING LOG

PERFORMED BY: Gregory Komperda

START TIME: 9:45am

DATE: 6/18/2014

LANDFILL NAME: Zion Landfill

Location of detected FID readings greater than 500 ppm Methane above background measurements	Time of Detection	Methane Concentration (ppm)
none	**none**	**none**

Weather Report

SKY: Clouds, heavy rain, thunderstorms

GROUND: Tall Grass

TEMP: 73 deg

WIND: Gusts 20mph E

PRESSURE: 29.88

HUMIDITY: 100%